1

1.)

create table Movie(mID int primary key, title VARCHAR(200), year int, director VARCHAR(200), constraint ty unique (title,year),

check (year>1900 and case when director="Steven Spielberg" then year<1990

when director="James Cameron" then year>1990

end));

create table Reviewer(rID int, name VARCHAR(200) NOT NULL, primary key(rID));

create table Rating(rID int , mID int , stars int NOT NULL , ratingDate date,

primary key(rID,mID,ratingDate),

check(stars between 1 and 5),

check(year(ratingDate)>2000),

foreign key (mID) references Movie(mID),

foreign key (rID) references Reviewer(rID));

2)

insert into Movie values(101, 'Gone with the Wind', 1939, 'Victor Fleming');

insert into Movie values(102, 'Silver Lining', 2001, 'George Lucas');

insert into Movie values(103, 'The Sound of Music', 2010, 'Robert Wise');

insert into Movie values(104, 'Jurassic Park', 1978, 'Steven Spielberg');

insert into Movie values(105, 'Titanic', 1997, 'James Cameron');

insert into Movie values(106, 'Snow White', 1937, null);

insert into Movie values(107, 'Avatar', 2009, 'James Cameron');

insert into Movie values(108, 'Tom Raider', 1981, 'Steven Spielberg');

insert into Reviewer values(201, 'Nithin Balaaji');

insert into Reviewer values(202, 'Harshit');

insert into Reviewer values(203, 'Vijitendra');

insert into Reviewer values(204, 'Sharad');

insert into Reviewer values(205, 'Anirudh');

insert into Reviewer values(206, 'Poorna');

insert into Reviewer values(207, 'Ayush');

insert into Reviewer values(208, 'Priyankal');

insert into Rating values(201, 101, 2, '2011-01-22');

insert into Rating values(201, 101, 4, '2011-01-27');

insert into Rating values(203, 103, 2, '2011-01-20');

insert into Rating values(203, 108, 4, '2011-01-12');

insert into Rating values(203, 108, 2, '2011-01-30');

insert into Rating values(204, 101, 3, '2011-01-09');

insert into Rating values(205, 103, 3, '2011-01-27');

insert into Rating values(205, 104, 2, '2011-01-22');

insert into Rating values(206, 107, 3, '2011-01-15');

insert into Rating values(206, 106, 5, '2011-01-19');

insert into Rating values(207, 107, 5, '2011-01-20');

insert into Rating values(208, 104, 3, '2011-01-02');

3)

4)

mysql> insert into Rating values(208, 104, null, '2011-11-11');

ERROR 1048 (23000): Column 'stars' cannot be null

5)

mysql> insert into Rating values(208, 104, 6, '2011-11-11');

ERROR 3819 (HY000): Check constraint 'rating\_chk\_1' is violated.

6)

mysql> insert into Rating values(209, Inse104, 4, '1998-11-11');

ERROR 3819 (HY000): Check constraint 'rating\_chk\_2' is violated.

7)

mysql> insert into Movie values(109, 'Robot', 1986, 'James Cameron');

ERROR 3819HY000): Check constraint 'movie\_chk\_1' is violated.

8)

mysql> insert into Rating values(787, 107, 3, '2019-01-15');

ERROR 1452 (23000): Cannot add or update a child row: a foreign key constraint fails (`ex6`.`rating`, CONSTRAINT `rating\_ibfk\_2` FOREIGN KEY (`rID`) REFERENCES `reviewer` (`rID`))

9)

mysql> insert into Rating values(208, 555, 3, '2019-01-15');

ERROR 1452 (23000): Cannot add or update a child row: a foreign key constraint fails (`ex6`.`rating`, CONSTRAINT `rating\_ibfk\_2` FOREIGN KEY (`rID`) REFERENCES `reviewer` (`rID`))

10)

alter table Rating drop FOREIGN KEY Rating\_ibfk\_1;

alter table Rating drop FOREIGN KEY Rating\_ibfk\_2;

**Q 2)**

Create Table Book (

Bid Int Primary Key,

Title Varchar(30),

Publisher Varchar(30)

);

Create Table Book\_Author (

Aid Int Primary Key,

Bid Int,

Aname Varchar(30),

Foreign Key (Bid) References Book(Bid)

);

Create Table Borrower (

Cardno Int Primary Key,

Bname Varchar(30),

Address Varchar(30),

Phone Numeric(10)

);

Create Table Book\_Loans (

Transid Int Primary Key,

Bid Int,

Cardno Int,

Date\_out Date,

Due\_date Date

);

insert into Book values ( 1 , "C Programming" , "Penguin") , ( 2 , "Java Programming" , "PerryRidge" ) , ( 3 , "Socket Programming" , "Pearson" )  , ( 4 , "DBMS TextBook" , "Riley" ) , ( 5 , "OS Fundamentals" , "McGraw Hill");

insert into Book\_author values ( 101 , 1 , "Harshit") , ( 102 , 2 , "Ayush") , (103 , 3 , "Priyanka") , ( 104 , 4, "Pinky") , (105 , 5 , "Niliish");

3)

update Book set Bid = 10 where Bid = 1;

14:21:35 update Book set Bid = 10 where Bid = 1 Error Code: 1451. Cannot delete or update a parent row: a foreign key constraint fails (`sys`.`book\_author`, CONSTRAINT `book\_author\_ibfk\_1` FOREIGN KEY (`Bid`) REFERENCES `book` (`Bid`)) 0.047 sec

4 alter table Book\_author drop foreign key Book\_author\_ibfk\_1;

5. alter table Book\_Author add constraint foreign key(Bid) references Book(Bid) ON UPDATE CASCADE;

6 update Book set Bid= 10 where Bid=1;

7

’

8

alter table Book\_author drop foreign key Book\_author\_ibfk\_1;

alter table Book\_author add constraint foreign key(Bid) references Book(Bid) ON DELETE CASCADE;

9 = 7

10.

alter table Book\_Loans add constraint

foreign key(CardNo) references Borrower(CardNo)

ON DELETE SET NULL

ON UPDATE RESTRICT;

11.

insert into Borrower values ( 51 , "Ayush" , "Chennai" , 109823) , ( 52 , "Pinky" , "Madurai" , 903951) , ( 53 , "Harshit" ,"Mumbai" ,  980980) , ( 54 ,"Nitin" , "Duabii"  , 12323) , (55 , "Priyanka" , "Bangalore" , 99819);

insert into Book\_Loans values ( 1001 , 4 , 52 , "2020-01-31" , "2020-04-1") , ( 1002 , 3 , 52 , "2020-01-03" , "2020-08-01" ) , ( 1003 ,10 , 53 , "2020-09-01" , "2020-12-12") , ( 1004 , 5 , 54 , "2020-09-01" , "2020-12-12") , ( 1005 , 11 , 55 , "2020-01-01" , "2020-12-12");

12.

a)delete from Borrower where Cardno = 54;

b)delete from Borrower where Cardno = 51;

13.

a)Update Book SET Title = "Real Madrid" where Bid = 3;

b) ;

Create Table Course

(

Coursenum Int,

Coursename Varchar(100),

Primary Key(Coursenum)

);

Create Table Professor

(

Profnum Int,

Profname Varchar(50),

Primary Key(Profnum)

);

Create Table Student

(

Studentnum Int,

Studentname Varchar(50),

Gpa Int,

Primary Key(Studentnum)

);

Create Table Section

(

Coursenum Int,

Term Int,

Sectionnum Int,

Profnum Int,

Primary Key(Coursenum,Term,Sectionnum),

Foreign Key(Coursenum) References Course(Coursenum)

);

Create Table Enrolledin

(

Coursenum Int,

Sectionnum Int,

Studentnum Int,

Term Int,

Primary Key(Coursenum,Sectionnum,Studentnum,Term),

Foreign Key(Coursenum) References Section(Coursenum),

Mark Int

);

Create Table Offsitesection

(

Coursenum Int,

Term Int,

Sectionnum Int,

Primary Key(Coursenum,Term,Sectionnum),

Foreign Key(Coursenum) References Section(Coursenum),

Location Varchar(100)

);